

04/15/14 Agenda

- Warm up Problem
- Review Homework
 - Worksheet 10 - Factoring Special Cases
- Chapter Review - 8.1-8.8

Homework

- Review Packet
 - It will be collected Thursday before the test

Warm Up



Put your name on a slip of paper.

Factor:

$$\underline{4x^2} - \underline{100} = (2x-10)(2x+10)$$

$$\sqrt{4x^2} = 2x$$

$$\sqrt{100} = 10$$

$$\left(\frac{x^3}{x^2} - \frac{3x^2}{x^2}\right) + \left(\frac{3x}{3} - \frac{9}{3}\right) \quad x - 3$$

$$\underline{x^2(x-3)} + \underline{3(x-3)}$$

$$\underline{(x^2+3)} \underline{(x-3)}$$

$$\begin{array}{c} x^2 \quad x - 3 \\ \begin{array}{|c|c|} \hline x^3 & -3x^2 \\ \hline +3x & -9 \\ \hline \end{array} \end{array}$$

10

Target 8A

- Simplify polynomials by addition, subtraction, or multiplication.

$$(-8x - 10x^3 - 2x^4) + (x^2 + 10x + 4x^3)$$

$$10x(6x + 4)$$

Target 8B

- Simplify multiplication of polynomials using double distribution (FOIL).

$$(x - 10)(2x - 7)$$

Target 8C

- Factor a polynomial using GCF's.

$$30x^4 + 54x^3 + 60x$$

Target 8D - Factor a trinomial.

$$x^2 + 12x + 35 = (x+7)(x+5)$$
$$21x^2 + 87x + 72$$

Target 8E - Factor special cases.

$$x^2 - 36 = (x+6)(x-6)$$
$$9x^2 - 25 = (3x+5)(3x-5)$$

Target 8F - Factor by grouping.

$$x^3 - 3x^2 + 3x - 9$$

$$\begin{array}{r}
 3x^3 + 6x^2 - 15x \\
 \hline
 1 \overline{) 3} \quad 1 \overline{) 6} \quad 1 \overline{) 15} \\
 \hline
 3 \quad 6 \quad 15 \\
 \hline
 0 \quad 0 \quad 0
 \end{array}
 \quad \text{ACF} \left(\begin{array}{c} + \\ - \end{array} \right)$$

$$3x \left(x^2 + 2x - 5 \right)$$

$$\left(\underbrace{3xy}_{3y} - \underbrace{6y}_{3y} \right) - \left(\underbrace{5x}_{-5} + \underbrace{10}_{-5} \right)$$

$$\underbrace{3y}_{3y} \left(\underbrace{x-2}_{-5} \right) - \underbrace{5}_{-5} \left(\underbrace{x-2}_{-5} \right)$$

$$\left(\underbrace{3y-5}_{-5} \right) \left(\underbrace{x-2}_{-5} \right)$$

	x	-2
$3y$	$3xy$	$-6y$
-5	$-5x$	$+10$

$$\underbrace{4x^2} - \underbrace{25} = (2x+5)(2x-5)$$

$$\sqrt{4x^2} = 2x$$

$$\sqrt{25} = 5$$

Unit Review: Sections 8.1 - 8.8

Test on THURSDAY!!!

$$x^2 - 9x + 20$$

$$(x-5)(x-4)$$

$$\begin{array}{r} 1 \cdot 20 \\ ac = 20 \quad -9 \\ \hline -5, -4 \end{array}$$

$$6x^2 - x - 2$$
$$(6x+3)(6x-4)$$

Yes Yes

~~6~~ 3 · 2

$$(2x+1)(3x-2)$$

$$6 \cdot -2 \quad b$$
$$ac = -12 \quad -1$$
$$\begin{array}{r|l} 2, -6 & .4 \\ \hline 3, -4 & -1 \end{array}$$

$$\#1 \quad (\underline{8n^3} - \underline{6n^4} - \underline{6n^2}) + (\underline{3n^4} + \underline{8n^2} - \underline{8n^3})$$
$$-3n^4 + 2n^2$$

$$\#3 \quad (4x + 7 - 8x^3) - 1(1 - 2x + x^3)$$
$$\underline{4x} + \underline{7} - \underline{8x^3} - \underline{1} + \underline{2x} - \underline{x^3}$$
$$-9x^3 + 6x + 6$$

Steps to Factoring Completely:

- 1.) Factor out the *Greatest Common Factor (GCF)*.
- 2.) If the polynomial has 2 or 3 terms, look for a difference of two squares, or a pair of binomial factors
- 3.) If the polynomial has 4 or more terms, group terms and factor to find common binomial factors.
- 4.) As a final check, make sure there are no common factors other than 1.